2. A system as recited in claim 1, further comprising an amplifier connected to the band pass filter that receives the resulting multiple channel IF signal, wherein the gain of the amplifier is controlled by an automatic gain control signal.

3. A system as recited in claim 2, wherein the system is capable of simultaneously processing at least eight channels, and wherein the system is implemented as a single integrated circuit, the system comprising:

at least eight frequency synthesizers;

at least eight mixers;

at least four low pass filters;

at least four high pass filters;

at least four summers;

at least four band pass filters; and

at least four amplifiers.

4. A system as recited in claim 2, further comprising an analog to digital converter connected to the amplifier, the analog to digital converter converting the resulting multiple channel IF signal to a digital representation, wherein the automatic gain control signal is based at least in part on an appropriate input signal level for the analog to digital converter.

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5. A system as recited in claim 4, further comprising:

at least two numerically controlled oscillators;

at least two pair of digital multipliers, each pair coupled to the analog to digital converter and a sine and cosine output from one of the at least two numerically controlled oscillators, wherein each pair of digital multipliers positions one of adjacent first and second channels at baseband and separates the in-phase and quadrature components of that positioned channel; and

at least four digital low pass filters, one connected to each multiplier, wherein each digital filter removes signals other than one in-phase or quadrature component from either the adjacent first or second baseband channel, such that each digital low pass filter provides one of (i) an in-phase component of the first adjacent baseband channel, (ii) a quadrature component of the first adjacent baseband channel, (iii) an in-phase component of the second adjacent baseband channel, and (iv) a quadrature component of the second adjacent baseband channel.

6. A system as recited in claim 1, further comprising a filter control module connected to one or more of the low pass filter, the high pass filter and the band pass filter, wherein the filter control module adjusts a cut-off frequency of at least one of the filters based at least in part on a symbol rate.

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7. A system as recited in claim 1, wherein the at least two frequency sources comprise at least two frequency synthesizers, and wherein the system further comprises a frequency synthesizer control module connected to the at least two frequency synthesizers, the frequency synthesizer control module setting a frequency produced by each of the at least two frequency synthesizers.

8. A system as recited in claim 1, further comprising:

a radio frequency switch that receives the input signal;

a wide-band low noise amplifier connected to the radio frequency switch; and

a wide-band band pass filter connected to the wide-band low noise amplifier and the at least two mixers, the wide-band band pass filter removing signals outside of a desired range of channel frequencies.

9. A system as recited in claim 1, wherein at least one of the plurality of channels lies within a frequency range of 900 MHz to 2200 MHz.

10. A system as recited in claim 1, wherein the input signal includes channels from a plurality of satellites, and wherein the first channel is from one of the plurality of satellites and wherein the second channel is from another of the plurality of satellites.

11. A system capable of receiving a signal that includes a plurality of channels, wherein the system allows at least two channels to be selected from the plurality of channels and combined into one sub-channel, such that certain signal processing may be performed on the one sub-channel, and wherein the certain signal processing of the one sub-channel requires fewer of certain components than would be required to process the at least two channels separately, the system comprising:

down conversion means for down converting a first channel to a first, relatively lower, intermediate frequency and for down converting a second channel to a second, relatively higher, intermediate frequency, wherein the means for down converting is coupled to an input signal that includes a plurality of channels;

first removal means, connected to the down conversion means, for removing signals above the first channel from the first intermediate frequency;

second removal means, connected to the down conversion means, for removing signals below the second channel from the second intermediate frequency,

signal combination means, connected to the first and second removal means, for combining the first intermediate frequency and the second intermediate frequency such that the first and second channel are adjacent to each other; and

third removal means, connected to the signal combination means, for removing signals below the first channel and signals above the second channel from the combined first and second intermediate frequencies, wherein a resulting multiple channel intermediate frequency signal contains the adjacent first and second channels.

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12. A system as recited in claim 11, further comprising amplification means, connected to the third removal means, for increasing the strength of the resulting multiple channel intermediate frequency signal, wherein the amplification means includes means for automatically controlling the gain of the amplification means.

13. A system as recited in claim 12, wherein the system is capable of simultaneously processing at least eight channels, and wherein the system is implemented as a single integrated circuit.

14. A system as recited in claim 13, further comprising digital conversion means, connected to the amplification means, for producing a digital representation of the resulting multiple channel intermediate frequency signal, wherein the means for automatically controlling the gain of the amplification means considers an appropriate input signal level of the digital conversion means.

15. A system as recited in claim 11, wherein the first, second, and third removal means comprise a low pass filter, a high pass filter, and a band pass filter, respectively, at least one of which is connected to a filter control module, wherein the filter control module adjusts a cut-off frequency of the least one filter based at least in part on a symbol rate.

16. A system as recited in claim 11, wherein at least one of the plurality of channels lies within a frequency range of 900 MHz to 2200 MHz.

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17. An integrated circuit that combines at least two channels selected from a plurality of channels into a sub-channel, wherein certain signal processing may be performed on the sub-channel using fewer of certain components than would be required to process the at least two channels separately, the system comprising:

at least two frequency synthesizers, one for each of at least two channels to be selected from a plurality of channels included within an input signal;

at least two mixers, each connected to one of the at least two frequency synthesizers and the input signal, wherein the at least two mixers position a first channel at a first, relatively lower, intermediate frequency (IF) and a second channel at a second, relatively higher, intermediate frequency (IF);

a low pass filter connected to one of the mixers, wherein the low pass filter receives the first IF and removes signals above the first channel;

a high pass filter connected to one of the mixers, wherein the high pass filter receives the second IF and removes signals below the second channel;

a summer connected to the low and high pass filters, wherein the summer receives and combines the first filtered IF and second filtered IF, such that the first channel and the second channel are adjacent to each other;

a band pass filter connected to the summer, wherein the band pass filter receives the combined first and second filtered IFs and removes signals below the first channel and above the second channel, such that a resulting multiple channel IF signal contains the adjacent first and second channels; and

an amplifier connected to the band pass filter that receives the resulting multiple channel IF signal, wherein the gain of the amplifier is controlled by an automatic gain control signal.

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18. An integrated circuit as recited in claim 17, further comprising an analog to digital converter connected to the amplifier, the analog to digital converter converting the resulting multiple channel IF signal to a digital representation, wherein the automatic gain control signal is based at least in part on an appropriate input signal level for the analog to digital converter.

19. An integrated circuit as recited in claim 18, further comprising a filter control module connected to one or more of the low pass filter, the high pass filter and the band pass filter, wherein the filter control module adjusts a cut-off frequency of at least one of the filters based at least in part on a symbol rate.

20. An integrated circuit as recited in claim 19, wherein the integrated circuit is capable of simultaneously processing at least eight channels, and wherein the integrated circuit comprises:

at least eight frequency synthesizers;

at least eight mixers;

at least four low pass filters;

at least four high pass filters;

at least four summers; and

at least four band pass filters;

at least four amplifiers; and

at least four analog to digital converters.

21. An integrated circuit as recited in claim 20, wherein at least one of the plurality of channels lies within a frequency range of 900 MHz to 2200 MHz.

22. In a system capable of receiving a signal that includes a plurality of channels, a method of combining at least two channels, selected from the plurality of channels, into one sub-channel such that certain signal processing may be performed on the one sub-channel, wherein the certain signal processing of the one sub-channel requires fewer of certain components than would be required to process the at least two channels separately, the method comprising acts of:

mixing a first channel to a first intermediate frequency;

mixing a second channel to a second intermediate frequency, wherein the second intermediate frequency is relatively higher than the first intermediate frequency;

filtering the first intermediate frequency to remove signals above the first channel from the first intermediate frequency;

filtering the second intermediate frequency to remove signals below the second channel from the second intermediate frequency;

summing to combining the first intermediate frequency and the second intermediate frequency such that the first channel and the second channel are adjacent to each other; and

filtering the combined first intermediate frequency and second intermediate frequency to remove signals below the first channel and above the second channel, such that a resulting multiple channel intermediate frequency signal contains the adjacent first and second channels.

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23. A method as recited in claim 22, further comprising an act of amplifying the resulting multiple channel intermediate frequency signal in accordance with an automatic gain control signal.

24. A method as recited in claim 23, wherein the method simultaneously combines at least eight channels into four separate sub-channels, and wherein the method is practiced within a single integrated circuit.

25. A method as recited in claim 23, further comprising an act of converting the resulting multiple channel intermediate frequency signal to a digital representation with an analog to digital converter, wherein the automatic gain control signal is based at least in part on an appropriate input signal level for the analog to digital converter.

26. A method as recited in claim 25, further comprising acts of:

digitally mixing the digital representation of the multiple channel intermediate frequency signal to position each of the adjacent first and second channels at baseband and to separate the in-phase and quadrature components of the first and second channels; and

filtering the in-phase and quadrature components of each channel to remove signals other than the desired in-phase or quadrature component of each channel.

27. A method as recited in claim 26, further comprising an act of subtracting a direct current offset from at least one of the in-phase or quadrature components of either the first or second channel.

28. A method as recited in claim 22, further comprising an act of adjusting a cut-off frequency used in at least one of the acts of filtering the first intermediate frequency, filtering the second intermediate frequency, and filtering the combined first intermediate frequency and second intermediate frequency, based at least in part on a symbol rate.

29. A method as recited in claim 22, further comprising an act of setting the first and second intermediate frequencies based on a frequency synthesizer control module.

30. A method as recited in claim 22, further comprising acts of:

receiving a wide-band input signal that includes the first channel and the second channel;

amplifying the received wide-band input signal; and

filtering the amplified wide-band input signal to remove signals outside of a desired range of channel frequencies.

31. A method as recited in claim 22, wherein at least one of the plurality of channels lies within a frequency range of 900 MHz to 2200 MHz.

32. A method as recited in claim 22, wherein the first channel includes video data and wherein the second channel includes broadcast data other than video data.

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33. In a system capable of receiving a signal that includes a plurality of channels, a method of combining at least two channels, selected from the plurality of channels, into one sub-channel such that certain signal processing may be performed on the one sub-channel, wherein the certain signal processing of the one sub-channel requires fewer of certain components than would be required to process the at least two channels separately, the method comprising steps for:

down converting a first channel to a first intermediate frequency;

down converting a second channel to a second intermediate frequency, wherein the second intermediate frequency is relatively higher than the first intermediate frequency;

removing signals above the first channel from the first intermediate frequency;

removing signals below the second channel from the second intermediate frequency;

combining the first intermediate frequency and the second intermediate frequency such that the first channel and the second channel are adjacent to each other; and

removing signals below the first channel and above the second channel, such that a resulting multiple channel intermediate frequency signal contains the adjacent first and second channels.

34. A method as recited in claim 33, further comprising a step for increasing the strength of the resulting multiple channel intermediate frequency signal in accordance with an automatic gain control signal.

35. A method as recited in claim 34, wherein the method simultaneously combines at least eight channels into four separate sub-channels, and wherein the method is practiced within a single integrated circuit.

36. A method as recited in claim 34, further comprising steps for:

producing a digital representation of the resulting multiple channel intermediate frequency signal, wherein the automatic gain control signal is based at least in part on an appropriate input signal level for producing the digital representation;

down converting the digital representation of the multiple channel intermediate frequency signal to position each of the adjacent first and second channels at baseband;

separating the in-phase and quadrature components of the first and second channels; and

removing signals other than a desired in-phase or quadrature component from each channel.

37. A method as recited in claim 36, further comprising a step for removing a direct current offset from at least one of the in-phase or quadrature components of either the first or second channel.

38. A method as recited in claim 33, further comprising a step for varying a cut-off frequency used in at least one of the steps for removing signals, based at least in part on a symbol rate.

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39. A method as recited in claim 33, wherein at least one of the plurality of channels lies within a frequency range of 900 MHz to 2200 MHz.

40. A method as recited in claim 33, wherein the second channel is dedicated to monitoring a particular one of the plurality of channels, and wherein the second channel includes broadcast data other than video data.

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